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NUTRITION TRAINING OF FOOD SERVICE PERSONNEL

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Many nutritionists and dietitians are being asked to provide training programs for food service personnel—cooks and cooks' helpers—in institutions where (1) the number of food service personnel is limited, (2) the educational background of staff is limited, and (3) the physical facilities are either poor or the equipment is not used to best advantage.

Some of our readers have requested guidelines for such programs. This issue of NPN reports on an in-service training program for food service personnel in selected children's homes in Cincinnati, Ohio.

PROGRAM IN CHILDREN'S HOMES — OHIO

The nutritional health of children in institutions has been a longtime concern of the Nutrition Services Unit, Ohio Department of Health.

The Division of Social Administration, Department of Welfare, was also aware of the need for improvement of food service in children's homes and often requested nutrition consultation for specific homes. Other homes were receiving little, if any, nutrition consultation.

Mrs. Virginia Jones Knauer, former Southwest District Nutrition Consultant, Ohio Department of Health, had long recognized the need for a training program for food service personnel, but had found it impossible to fit into her busy schedule.

Before she resigned as consultant, she proposed a pilot project to be funded by the Division of Maternal and Child Health, Ohio Department of Health. In 1964, a committee considered this proposal and a nutritionist was hired as a planner-instructor to conduct the March-June program. Plans included (a) initial evaluation visits to 14 selected homes in the Cincinnati area, (b) a series of six weekly

Introducing —

MRS. HELEN FOWLER, M.S., *Nutritionist*

Nutrition Program News begins a new era with Mrs. Helen P. Fowler assuming responsibility for planning and preparing the articles.

Mrs. Fowler has had varied experience in nutrition work including high school and college teaching, hospital dietetics, and consultant work in public health nutrition. It was while she was in public health nutrition work that she served as the planner-instructor for the project described in this issue.

sessions, 3 hours each, for the homes' food service personnel and (c) re-evaluation visits.

A total of 750 children, mostly mid-adolescents, were living in these orphanages and corrective institutions. All homes were philanthropic and thus were eligible for government-donated foods.

The planner-instructor rated each home. She used an evaluation form adapted from one developed by Dr. Jessie Obert and Miss Marjorie Burr, Los Angeles County Health Department, as part of an in-service training program for nursing homes.

Food service was rated in terms of nutrient quality of meals, food acceptability, and management practices. The results of the initial visits served as a guide for planning.

Thirty-three food service personnel from 12 of the 14 homes contacted attended the classes. Some administrators attended but were not registered as class members.

At the first session, each student was furnished with a nameplate, a brochure, course outlines, a master bibliography, and a notebook-folder. Pertinent charts and worksheets were distributed at each of the following sessions.

Publications from the Ohio Department of Health, United States Department of Agriculture, National Dairy Council, and other reliable organizations were distributed to the members.

A display of books, periodicals, and menu files was set up in the classroom. Other visuals included specially designed posters and charts, food comparison cards, slides, films and filmstrips.

Class presentations were geared to the general educational level of the group. Included were lecture-discussions with use of the blackboard, demonstrations, and some laboratory participation. The Supervising Sanitarian, Southwest District, Ohio Department of Health, took part in the last session.

The nutritionally adequate diet.—Nutritional goals were presented in terms of "Food for Fitness—A Daily Food Guide." Each food group had to be carefully, but simply, explained and illustrated to clear up the many misconceptions of these workers.

For example, many had indicated on the initial visits that their children's recommended milk intake had been amply met in cooked foods. Few homes, however, served soups made with milk or consistently fortified other foods with non-fat dry milk. Discussion revealed that the workers did not understand how to substitute (1) one form of milk for another or (2) cheese for milk.

There was also a great deal of confusion about dark-green and deep-yellow vegetables. It was explained that green beans, for example, were not to be considered in the dark-green group and could not be used as a good vitamin A source.

Discussion and simple demonstrations were used to help the students understand the food guide as a basis for planning menus served in their dining rooms.

Menu planning.—A *menu pattern* was developed to show how the daily food intake could be divided into meals and snacks that would meet the nutrient and energy needs of the children. For the school age children, the pattern would supplement the Type A school lunch.

Planning of actual menus included, in addition to nutritional needs, a consideration of such things as (1) flavor and texture, (2) consistency, (3) temperature of foods when served, (4) color, and (5) form. Neatness and arrangement of food served was also discussed.

In teaching mechanics of menu planning, the following steps were suggested:

1. Plan "main dish" or entrée first. Select other items to complete the meal. Old menus may help.
2. Have a balance in the work load; for example, if a complicated entrée is chosen, use a simple dessert.

3. Check meal from the standpoint of equipment—use equipment to best advantage.

4. Check for variety in color, form, and texture.

The planner-instructor gave the example of gelatin as a carrier for other foods. It was pointed out, however, that the gelatin offered little food value except food energy.

5. Check to make sure that flavors, garnishes, and essential ingredients are not repeated in the same menu. This principle showed the need for knowledge of ingredients in recipes—in other words, for a good recipe file.

6. Balance low-cost and high-cost menu items to keep within the budget.

7. Read pertinent books and periodicals whenever possible. Keep resource materials at hand. Each student received a list of resources for this purpose.

To make menu planning easier, a four weeks' *cycle menu* plan was devised and presented to the class with an explanation of how the plan could be tailored to individual institutions. Demonstrations of its use showed the cycle menu plan was flexible enough to include innumerable combinations of foods.

Class members were first introduced to the *standardized recipe* by observation. Each member received one or more for his notebook and learned how the standardized recipe differed from the casual recipe that may vary each time it is prepared. Experience with group feeding has shown that the clientele likes to know what a specific item on the menu is going to be like. Many cooks had used no recipes at all and none used household scales.

Standardized recipes using donated foods were on hand for the class. A demonstration on reconstituting dry milk was given and a chart showing equivalents for dried egg was supplied. Custard made from a mixture of dry milk, dried egg, and powdered vanilla was sampled.

The students were shown how to organize the standardized recipes into a usable *recipe file*.

The use of certain pieces of small equipment, e.g., the ladle and the scoop, were demonstrated as a means of achieving *portion control*, which is helpful in making sure that each child receives the specified amounts of food he needs.

Purchasing, receiving, and storage

The two major problems of food purchasing found in the homes were: (1) purchasing before planning menus and (2) purchasing by different persons—all the way from administrators to cooks or cooks' helpers.

Basic principles of quantity food purchasing presented were: (1) what to purchase—determined by the cycle menu, (2) how to purchase—for the number of persons to be fed, (3) where to purchase—from dependable food dealers in the area, and (4) when to purchase—in view of storage facilities. Help was also given in developing a purchasing plan—based on basic principles and tailored to the institution.

Emphasis was placed on the close, yet flexible, relationship between quality, quantity, and price. Information on the basic cuts of meat in relation to cost and yield was presented because meat is often the most expensive single item on the menu. A table on comparative meat costs was provided each class member. It supplied information on: (1) percent of cooking shrinkage, (2) trimming and boning in terms of percent of cooked weight, (3) cost per pound from wholesaler, (4) approximate amount to buy for one pound of ready-to-serve meat, (5) cost per pound ready-to-serve, and (6) cost per serving.

Because money spent for food that is wasted adds to the total food cost, the class was instructed in the important relationship between purchasing know-how and food waste.

A table showing the approximate amount of money saved by purchasing the larger-sized cans of food was given to class members.

The students also received information on how fresh, canned, and frozen foods were packed and graded.

Yield from canned fruits and vegetables was demonstrated by a laboratory lesson on can-cutting. Three brands of five food items—pears, peaches, green beans, mixed vegetables and green peas—were used. Drained weight was calculated on all five items; density of syrup and count on the fruits.

In laboratory work, students scored items demonstrated for flavor, uniformity in size, texture, and color.

A discussion of quality in food followed the laboratory session. Students asked questions. The planner-instructor indicated that Grade A foods were not always wise purchases. Labels, which had been removed before the lesson, were discussed after completion of the laboratory session.

A simple definition of specification buying was given, but no intensive study of specification buying was made. The planner-instructor felt that some acquaintance with scientific purchasing should be provided, if only for the use of the administrator.

Some of the homes grew a part of their own vegetables and fruits, hence their purchasing pattern was altered in the summer season. The class learned how to substitute similar types of fruits and vegetables for those on the cycle menu. Examples were cited and special emphasis given to vitamin A-rich and vitamin C-rich foods.

Initial visits indicated that most of the homes were overstocked with food—both donated and purchased. A suggestion was made that when inventories were down to a normal level, a schedule of ordering should be established to fit the cycle menu. In most instances, monthly or perpetual inventories were not routine procedures.

An organized storeroom was pointed out as the first step toward an accurate inventory. The physical aspects of the storeroom—including its location—were included. Rotation of goods on the shelf was emphasized.

Ordering procedure based on an up-to-date inventory was also discussed. Students learned about receiving food including the necessity of checking incoming foods against specifications.

Temperatures were given for adequate control of refrigerated storage. Fresh eggs were not stored in the refrigerator in many of the homes.

Food preparation

Class members learned about quality changes in food during storage, preparation, and service. They were given tables that showed vitamin losses under improper storage conditions, e.g., too high a temperature in the storeroom.

Students were warned that when food is improperly handled and prepared, changes other than nutritive ones can occur. The changes discussed were: (a) flavor losses, (b) color losses, (c) poor texture and consistency, (d) undue shrinkage, and (e) bacteriological changes. Also, one change often accompanies another, such as the change in the flavor and the color of cabbage when it is overcooked.

They were shown that good organization and management policies help to improve food preparation practices. Simple menus, basic recipes with variations, standard forms for requisitions and records, and job schedules, especially for new employees, are parts of good management.

Among recommendations given to students concerning food preparation were: (a) thaw frozen meat in the refrigerator, (b) wash vegetables before trimming, (c) cook frozen vegetables without thawing, (d) cook vegetables whole when feasible, (e) avoid undue exposure of food to the air, light, and water.

Proper techniques of preparation included: (a) when cooking vegetables, use little (boiling) water, cover, and cook only until tender, (b) serve raw vegetables and fruits occasionally, (c) do not add baking soda to vegetables, (d) cook meats at low to moderate temperature to increase yield and flavor, (e) overcook meats and vegetables when practical, and (f) do not overhandle foods.

Students were given guidance on the service of food such as: (a) serve as soon as possible after preparation to avoid

continued cooking, and (b) make good use of leftovers. Creative ideas on leftovers may be written on back of recipe card.

Because work simplification is an integral part of good management, the class was introduced to the fundamentals. Class members learned that work simplification did not necessarily mean finishing a job in a shorter period of time, but that the job can be done with less fatigue.

The planner-instructor gave assistance on the use of donated foods in food preparation. Instruction sheets were prepared on the following subjects:

- Mixing dry skim milk
- Using dry skim milk
- Storing and using dried eggs
- Substituting dried eggs for fresh eggs
- Recipe for basic custard mix
- Other recipes involving donated foods
- Adjustment of recipes to smaller or larger yields

Safety and sanitation

Inadequate cleaning practices were observed in several of the homes. Accordingly, good practices for sanitation and safety in the food service facility were presented by the Supervising Sanitarian, Southwest District, Ohio Department of Health.

Illustrative materials included instruction sheets on accident prevention and a temperature and food sanitation guide.

A simple explanation of additives in the food supply was made by comparing additives with simpler, more familiar chemicals used frequently in food preparation. These were table salt, baking soda, and vinegar.

Class members learned that the use of additives and preservatives is carefully controlled by law and that labels go far in informing the consumer.

EVALUATION OF SESSIONS

During the initial visits the major weaknesses found were in management practices and in the implementing of sound policies. The absence of work schedules, food cost records, inventories, and up-to-date menus demonstrated this. All food service personnel were in urgent need of training.

Physical facilities varied greatly. Some facilities were quite new, while others were outmoded.

The nutrient content and the acceptability of the food was directly related to management. Meals, although accepted and apparently enjoyed by most of the children, were most often low in the vitamin A-rich and vitamin C-rich foods. In many instances, salads were not generally served. It was also questionable whether the requirements in the meat and other protein group were always met.

The initial visits did, however, point out that the nutritive content of meals and the acceptability of food were higher when physical facilities approached adequacy.

On revisits, after only two months, there was little obvious change, but there were signs of interest for future improvement. A few pieces of small equipment had been purchased. Some homes had placed illustrative materials in strategic areas in their food service facilities. Two administrators had purchased books containing quantity recipes. There was a general tendency toward improvement in menu planning.

The revisits were welcomed. One student, in particular, showed vast improvement in food preparation. This was evidenced by a demonstration he made of the correct way to prepare spinach.

Former students telephoned to ask for ways to improve the palatability of their foods. The planner-instructor was invited to meet with food service personnel in one home after the revisit. They had written menus and wanted an opinion on their "new" ideas.

The most gratifying change was in attitudes. The general attitude now was one of desire for more training. Class members felt that in spite of what had been carried back to their institutions, more needed to be done.

There is no doubt that more and better communications between the administrator and the total food service personnel would be helpful.

In conclusion

In its broad sense, good food service means satisfying meals that meet the nutritional needs of the consumers. Meal planners need a basic knowledge of food values to help them select combinations of foods leading to well-balanced diets.

Finally, proper food handling is essential to conserve nutrients, to make food safe for consumption, and to prepare attractive and appetizing meals.